

REMARKS

The claims now pending in the application are Claims 1 to 32, the independent claims being Claims 1 and 17. Claims 1 to 7, 10 to 23 and 25 to 32 have been amended herein.

In the Official Action dated January 20, 2004, Claims 1 to 10 and 14 to 16 were rejected under 35 U.S.C. § 103(a), as unpatentable over U.S. Patent No. 5,587,820 (May) in view of U.S. Patent No. 5,565,914 (Motta), and Claims 11, 12 and 17 variously were rejected under 35 U.S.C. § 103(a), as unpatentable over the May '820 patent and the Motta '914 patent in view of one or more of U.S. Patent No. 5,255,088 (Thompson), U.S. Patent No. 6,157,420 (Nakanishi) and U.S. Patent No. 4,028,725 (Lewis). Reconsideration and withdrawal of the rejections respectfully are requested in view of the above amendments and the following remarks.

Initially, Applicant gratefully acknowledges the Examiner's indication that the application contains allowable subject matter, and that Claims 13 and 29 are allowable over the prior art. In this regard, Claims 13 and 29 have been amended herein to improve their form. No new matter has been added, and Applicant submits that these claims remain allowable over the prior art.

The rejections of the claims over the cited art respectfully are traversed. Nevertheless, without conceding the propriety of the rejections, independent Claims 1 and 17 have been amended herein more clearly to recite various novel features of the present invention, with particular attention to the Examiner's comments, and Claims 2 to 7, 10 to 12, 14 to 16, 18 to 23, 25 to 28 and 30 to 32 have been amended herein to improve their form. Support for the proposed amendments may be found in the original application. No new matter has been added.

The present invention relates to a novel image pickup apparatus. In one aspect, as now recited in independent Claim 1, the image pickup apparatus of the present

invention includes first and second image pickup portions (see., e.g., 120 and 53 in Figs. 1 and 2) each of which includes a plurality of photoelectric conversion portions to receive a different wavelength component of object light, and first and second optical systems (see, e.g., 100) which guide the object light to the first and second image pickup portions, respectively, wherein each of the first and second optical systems performs a filter function (see., e.g., 54) whose transmission factor becomes smaller as the distance from an optical axis thereof becomes greater (see, Figs. 1 and 2).

In another aspect, as now recited in independent Claim 17, the image pickup apparatus similarly includes first and second image pickup portions, including respective plurality of photoelectric conversion portions, where only one of the first and second optical systems performs such a filter function.

Applicant submits that the prior art fails to anticipate the present invention. Moreover, Applicant submits that there are differences between the subject matter sought to be patented and the prior art, such that the subject matter taken as a whole would not have been obvious to one of ordinary skill in the art at the time the invention was made.

Applicant respectfully submits that the cited art fails to disclose or suggest at least the above-described feature of the present invention. None of the May '820 patent, the Motta '914 patent, the Thompson '088 patent, the Nakanishi '420 patent and the Lewis '725 patent discloses or suggests the features of a plurality of image pickup portions, each of which includes a plurality of photoelectric conversion portions, for receiving different wavelength component of the object light, and which function together with each of a plurality of optical systems, each of which performs a filtering function, as disclosed and claimed in the present application (Claim 1). In particular, the May '820 patent discloses to photoelectrically convert object light so as to pick up an object image and store the picked-up image in an FLC (see, e.g., Fig. 1 and the corresponding disclosure at Column 3, lines 30 to 60). Although the May '820 patent teaches a pixel array with microlenses,

Applicant submits the May '820 patent fails to teach or suggest the features of first and second optical systems functioning together with first and second image pickup portions, as disclosed and claimed in the present application (Claim 1).

Similarly, with respect to independent Claim 17, (see, e.g., the embodiments of Figs. 21 and 22) where not all of the plurality of optical systems perform a filter function (see., e.g., 610 and 611 in Figs. 21 and 22), Applicant submits that each of the cited references fails to teach or suggest at least the features of first and second optical systems functioning together with first and second image pickup portions, as disclosed and claimed in the present application (Claim 17).

For the above reasons, Applicant submits that independent Claims 1 and 17 are allowable over the cited art.

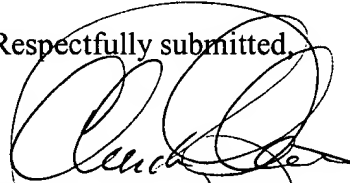
Claims 2 to 16 and 18 to 32 depend from Claims 1 and 17, respectively, and are believed allowable for the same reasons. Moreover, each of these dependent claims recites additional features in combination with the features of independent Claims 1 and 17, and is believed allowable in its own right. Individual consideration of the dependent claims respectfully is requested.

In formal matters, the specification has been amended to correct a spelling error, as requested by the Examiner. No new matter has been added.

Applicant believes that the present Amendment is responsive to each of the points raised by the Examiner in the Official Action, and submits that the application is in allowable form. Favorable consideration of the claims and passage to issue of the present application at the Examiner's earliest convenience earnestly are solicited.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,



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